ABSTRACT

**[00043]** A kinematic electrode mount is provided for an ion implanter in which an electrode insert member having an electrode body portion which defines an aperture, is inserted into an electrode support frame. In one embodiment, a first kinematic alignment pin of the insert member engages a first, groove-shaped kinematic alignment surface of the electrode support frame to align the first alignment pin in two orthogonal directions relative to the electrode support frame. In addition, a second kinematic alignment pin of the insert member engages a second kinematic alignment surface of the electrode support frame to align the insert member in a rotational orientation relative to the electrode support frame. A plurality of flanges of the insert member engage the electrode support frame to retain the insert member in the aligned position and to electrically couple the electrode insert member to the electrode support frame. A spring positioned between the electrode insert member and the electrode support frame biases the electrode insert member in the aligned and retained position relative to the electrode support frame. In another embodiment, the electrode support frame has alignment pins and the insert member has alignment slots.